

Social Determinants and Mental Health Care Utilization Among Individuals at Clinical High Risk for Psychosis

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Objective: Clinical high risk for psychosis (CHR-P) is associated with distress, impairment, and elevated risk for developing full-threshold psychosis. Early intervention can improve prognostic outcomes, but limited research has investigated associations between social determinants and mental health care utilization among people at CHR-P. The authors aimed to explore whether distressing positive symptoms, race-ethnicity, immigration, racial discrimination, and social support correlate with mental health care utilization in this population.

Methods: Data were drawn from a parent study in which community-based participants completed questionnaires and clinical interviews. Participants included in the present analyses were ages 16–30 and met interview-based criteria for CHR-P (N=171).

Results: Asian and Black participants were significantly less likely than White participants to report past use of mental health care. Black participants were significantly less likely than White participants to report current use

of services. Differences in past service use for Asian and Black participants versus Hispanic/Latinx participants and in current service use for Asian versus White participants approached statistical significance. Trend-level associations suggesting a lower likelihood of service use among immigrant participants were attenuated when household income was accounted for. Across the full sample, distressing positive symptoms significantly predicted current use of services.

Conclusions: Associations between self-reported race-ethnicity and mental health care utilization persisted even when analyses accounted for distressing positive symptoms, social support, and discrimination. As CHR-P research and practice increasingly focus on early intervention, study findings underscore the importance of better understanding contextual factors and social determinants that are associated with mental health service use among youths at CHR-P.

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The clinical high risk phase of psychosis is characterized by attenuated positive symptoms that cause clinically significant distress or impairment (1). This phase, in which symptoms are not severe or enduring enough to meet *DSM-5* criteria for a psychotic disorder (e.g., schizophreniform disorder) (1), may be thought of as “potentially prodromal” (2). Estimates suggest that approximately 25% of individuals at clinical high risk for psychosis (CHR-P) develop full-threshold psychosis within 3 years (3, 4), whereas others’ symptoms persist or remit (5). Early intervention may reduce conversion rates from CHR-P to psychosis and promote positive clinical outcomes, including reduced CHR-P symptom severity (6, 7), yet many individuals at CHR-P do not receive clinical services. Little is known about the factors related to treatment seeking among youths at CHR-P (8, 9).

HIGHLIGHTS

- In a community sample of individuals at clinical high risk for psychosis (CHR-P), differences in mental health care utilization by race-ethnicity were observed.
- Asian and Black participants were less likely than White participants to report past use of mental health care, and Black participants were less likely than White participants to report current use of mental health services.
- Distressing positive symptoms were associated with current use of mental health services across the full sample.
- The findings suggest a need to increase outreach to or accessibility of services for individuals at CHR-P who may be less likely to receive care.

Social determinants and contextual factors play an integral role in CHR-P (10, 11) and in access to and use of mental health services (12). Some theoretical frameworks, such as the psychosis proneness-persistence-impairment model (13), emphasize how proneness to psychotic symptoms and environmental risk can exacerbate symptom persistence and risk for psychosis. Others highlight the complexities of resilience factors such as social ties for individuals with serious mental illness (14). Guided by frameworks that consider both risk and resilience factors, we drew on a social-ecological model of mental health care utilization (15) to inform selection of the following social determinant variables that were available via secondary data analysis related to CHR-P and mental health service use: self-reported race-ethnicity, experiences of racial discrimination, immigration status, and social support.

Racial-ethnic disparities exist in symptomatology and outcomes among individuals at CHR-P (16, 17). Although racial-ethnic disparities in service use have been widely observed (18, 19), few studies have investigated these disparities among youths at CHR-P. Experiences of racial-ethnic discrimination appear to be associated with psychosis spectrum symptoms and to be elevated among individuals at CHR-P (20, 21). Discriminatory experiences are linked with medical mistrust (22), which can stem from institutional racism within health care systems, lack of culturally responsive services, and the historical context of ineffective or even abusive services (23). Mistrust of health care systems, in turn, is associated with lower service use (24). Thus, discrimination may be a factor that is related to service use among those at CHR-P.

Social support is another social determinant linked to both mental health service use and CHR-P. Lower levels of social support have been observed among individuals at CHR-P relative to comparison groups (25, 26) and have been associated with greater positive symptom severity (27). Greater social support has been associated with lower perceived need for mental health care in general, although this trend may be reversed for individuals with serious mental illness (28). Thus, social support may be associated with service use, but this link is unclear among those at CHR-P.

Immigration is another social determinant with potential implications for mental health care use among individuals at CHR-P (29, 30). Meta-analyses suggest that immigration and postmigration factors may increase the risk for psychosis (31, 32), although limited research to date has examined this association in the United States (33). Some studies have identified a longer duration of untreated psychosis among immigrants (34, 35), suggesting potential barriers to accessing services during the CHR-P phase. Overall, these social determinants have been linked with both mental health care utilization and CHR-P but have not been explicitly examined as correlates of service use among those at CHR-P.

In this study, we aimed to build on the aforementioned frameworks of the psychosis spectrum and service use to examine potential correlates of mental health care utilization among individuals at CHR-P. Specifically, we examined

whether distressing positive symptoms, self-reported race-ethnicity, immigration, experiences of racial discrimination, and social support were associated with past and current mental health care utilization among people at CHR-P.

METHODS

Procedure

In this secondary data analysis, we used data from the Multisite Assessment of Psychosis-Risk (MAP) study (36). The study was approved by the institutional review boards at the participating universities. Social media and website advertising (e.g., Craigslist), community flyers, and university recruitment (e.g., ResearchMatch) were used to recruit a community sample from four broad catchment areas. Eligibility criteria included being ages 16–30, located in one of the designated geographic regions, and a first-time survey taker. Written informed consent was obtained after study procedures were explained (parental consent and child assent were obtained for minors). Participants completed Qualtrics-administered self-report questionnaires, including those described below. Measures of quality assurance (e.g., attention checks) were included throughout the battery. Participants who scored above author-recommended and empirically established cutoff levels on either the PRIME screen (two or more responses of “somewhat agree”) (37, 38) or the 92-item Prodromal Questionnaire (PQ-92; eight or more distressing positive symptoms) (39) and randomly selected participants who scored below both cutoffs were invited to participate in an interview procedure that included the Structured Interview for Psychosis-Risk Syndromes (SIPS) (1), the gold standard assessment for CHR-P syndromes. Data examined in this study were collected from October 2017 to October 2022. A detailed description of the parent study is available in Ellman et al. (36).

Participants and Measures

Demographic characteristics. Individuals included in analyses were MAP study participants who met SIPS criteria for CHR-P (1) and for whom self-reported mental health care utilization data and complete data on measures used in analyses were available. Participants self-reported demographic variables, including race-ethnicity, immigration, sex, and age. The following self-reported race-ethnicity categories were used for analyses: non-Hispanic Asian, non-Hispanic Black, non-Hispanic White, and Hispanic/Latinx. Two multiple-choice questions were used from a demographic characteristics questionnaire, which drew from the race and ethnicity categories of the National Institute of Mental Health Data Archive: “How would you describe your race? (American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or other Pacific Islander, White, or prefer not to answer)” and “How would you describe your ethnicity? (Hispanic or Latino, not Hispanic or Latino, or prefer not to answer).” Participants who selected “not Hispanic or Latino” or “prefer not to answer” for the ethnicity question

were categorized as their self-reported race. Participants who selected “Hispanic or Latino” were categorized as Hispanic/Latinx. Importantly, racial-ethnic groups used in the present study, and commonly in research, are socially constructed categories (40), and categorizing individuals into such groups is an imperfect process. These categories are understood to denote differences in exposure to systemic factors such as interpersonal and structural racism. Immigration was defined by whether participants reported being born outside the United States.

SIPS. The SIPS is a semistructured interview that assesses for the presence of CHR-P syndromes (1), determined by ratings on five positive symptom domains (unusual thought content, suspiciousness, grandiosity, perceptual abnormalities, and disorganized communication). The SIPS has strong interrater reliability and predictive validity for conversion to psychosis (41). Participants who met SIPS CHR-P criteria were included in analyses.

PQ-92. The PQ-92 (39) is a 92-item self-reported continuous measure of psychosis risk symptoms that includes a 45-item positive symptom subscale. The PQ-92 has strong predictive and concurrent validity with the SIPS, internal consistency and test-retest reliability, and sensitivity in identifying individuals who meet interview-based CHR-P criteria (39, 42). For items with a positive response, participants indicated whether the experience caused them distress (yes or no). In this study, internal consistency for the number of distressing positive symptom items was $\alpha=0.88$.

Experiences of Discrimination Scale. The Experiences of Discrimination Scale (EOD) (43) is a self-report questionnaire assessing exposure to racial discrimination in several domains. The situation subscale asks participants whether they have experienced discrimination or unfair treatment in nine different situations (e.g., getting medical care or getting a job). Scores represent the total number of situations in which participants reported experiencing discrimination (43). Internal consistency for the EOD was $\alpha=0.83$ in this study.

Lubben Social Network Scale-Revised. The Lubben Social Network Scale-Revised (LSNS-R) is a 12-item self-report questionnaire measuring levels of social engagement and support from family, friends, and neighbors (44). Participants rate the frequency of their social interactions on a 6-point scale (0, no engagement, to 5, high social engagement). Responses are summed, and total scores range from 0 to 60. In this sample, internal consistency for the LSNS-R was $\alpha=0.82$.

Mental health care utilization questions. Participants were asked questions about current (“In the past 3 months, have you received any mental health care?”) and past (“Before 3 months ago, did you ever receive mental health care?”) service utilization and responded yes (coded 1) or no (coded 0).

Analyses

Two logistic regressions were conducted in SPSS, version 29, to examine cross-sectional correlates of past (model 1) and current (model 2) mental health care use. Regression models included distressing positive symptoms, self-reported race-ethnicity, immigration, experiences of discrimination, and social support as predictors. Continuous predictors were evaluated before the analysis for normality and outliers, with estimates suggesting reasonable normality (skew <2, kurtosis <7) (45). Supplemental analyses (see the online supplement to this article) were conducted with the inclusion of household income as a covariate and with a subsample of Asian, Black, and Hispanic/Latinx participants only. A $p<0.05$ was considered statistically significant.

RESULTS

The analysis sample (Table 1) yielded 171 participants at CHR-P (11 participants were excluded because of missing data). Participants were ages 16–30 years (mean \pm SD=20.81 \pm 2.86 years). Most of the sample were female (70%), White (N=94 of 171, 55%), and born in the United States (87%).

Model 1: Past Mental Health Care Utilization

The overall model predicting past mental health care utilization was statistically significant (Table 2). Current distressing positive symptoms did not significantly predict past service use. Asian participants were less likely to have previously used mental health services compared with White participants (OR=0.30, $p=0.021$), and a similar trend (not statistically significant) was observed for Asian versus Hispanic/Latinx participants. Black participants were also less likely than White participants to report past use of mental health care (OR=0.30, $p=0.045$), and a similar trend (not statistically significant) was observed for Black versus Hispanic/Latinx participants. No statistically significant differences were found in past use of mental health care between Hispanic/Latinx and White participants or between Asian and Black participants. In addition, participants who immigrated to the United States tended to be less likely than those born in the United States to have reported past use of mental health care, although this finding was not statistically significant. Experiences of discrimination and social support did not significantly predict past mental health care utilization. Supplemental analyses with the inclusion of household income as a covariate (N=151; see Table S1 in the online supplement) revealed patterns that were consistent with the above results, although immigration was no longer a trend-level predictor of past service use.

Model 2: Current Mental Health Care Utilization

The overall model predicting current mental health care utilization was statistically significant (Table 3). The number of distressing positive symptoms was a statistically significant predictor of current use of mental health services (OR=1.06, $p=0.026$). Self-reported race-ethnicity significantly predicted current service use; compared with White participants,

TABLE 1. Demographic and clinical characteristics of individuals at clinical high risk for psychosis in the present study

Variable	Total (N=171)		Asian (N=28)		Black (N=25)		Hispanic/Latinx (N=24)		White (N=94)	
	N	%	N	%	N	%	N	%	N	%
Sex assigned at birth										
Female	120	70	23	82	15	60	16	67	66	70
Male	50	29	5	18	10	40	7	29	28	30
Prefer not to answer or missing	1	1	0	0	0	0	1	4	0	0
Born in the United States	148	87	17	61	22	88	22	92	87	93
Current service user ^a	67	39	7	25	6	24	8	33	46	49
Past service user ^b	112	66	12	43	13	52	17	71	70	75
	M	SD	M	SD	M	SD	M	SD	M	SD
Age (years)	20.81	2.86	20.12	2.30	19.48	2.33	21.54	2.98	21.18	2.99
PQ-92 distressing positive symptoms ^c	12.37	7.14	12.14	6.54	12.80	5.85	10.54	6.90	12.79	7.69
EOD score ^d	1.44	2.06	2.14	1.48	3.64	2.63	2.88	2.47	0.28	0.68
Social support score ^e	30.33	9.28	28.75	7.73	30.12	10.44	29.21	9.39	31.14	9.40

^a Individuals who reported using services within the past 3 months.
^b Individuals who reported using services prior to the past 3 months.
^c Possible scores on the positive symptom subscale of the 92-item Prodromal Questionnaire (PQ-92) range from 0 to 45, with higher scores indicating a greater number of self-reported distressing symptoms.
^d Possible scores on the Experiences of Discrimination Scale (EOD; situation subscale) range from 0 to 9, with higher scores indicating a greater number of situations in which an individual has experienced discrimination or unfair treatment.
^e Social support scores, derived from the Lubben Social Network Scale–Revised total score, range from 0 to 60, with higher scores indicating higher levels of social engagement.

Black participants were less likely to report current service use (OR=0.23, p=0.031), and a similar trend (not statistically significant) was observed for Asian participants. No statistically significant group differences in current use of mental health care were observed between Hispanic/Latinx participants and any other racial-ethnic group or between Asian and Black participants. Being born outside the United States tended to be negatively associated with current service use. Experiences of discrimination and social support did not significantly predict current service use.

Supplemental analyses with the inclusion of household income as a covariate (N=153; see Table S2 in the online supplement) revealed patterns that were mostly consistent with the above results, with some distinctions. Household income tended to be positively associated with current service use (result approached statistical significance), and immigration

was no longer a trend-level predictor of current service use. In addition, in exploratory analyses that included only Asian, Black, and Hispanic/Latinx participants (N=77; see Table S4 in the online supplement), social support was a statistically significant negative predictor of current service use.

DISCUSSION

In this study, we examined whether distressing positive symptoms, self-reported race-ethnicity, immigration, experiences of racial discrimination, and social support have a cross-sectional relationship with mental health care utilization among individuals at CHR-P. Associations were found between service use and both self-reported race-ethnicity and distressing positive symptoms (for current service use only). Associations between immigration and service use were attenuated when

TABLE 2. Predictors of past mental health service use among individuals at clinical high risk for psychosis^a

Predictor	b	SE	χ ²	OR	95% CI	p
PQ-92 distressing positive symptoms	0.04	0.03	2.03	1.04	0.99–1.10	0.154
Asian (reference: White)	-1.21	0.52	5.31	0.30	0.11–0.84	0.021
Black (reference: White)	-1.20	0.60	4.02	0.30	0.09–0.97	0.045
Hispanic/Latinx (reference: White)	-0.09	0.61	0.02	0.91	0.28–3.00	0.881
Immigrated to United States	-0.94	0.51	3.32	0.39	0.14–1.07	0.069
EOD score	0.05	0.11	0.21	1.05	0.85–1.30	0.645
Social support score	0.02	0.02	0.79	1.02	0.98–1.06	0.373
Follow-up model comparisons						
Asian (reference: Hispanic/Latinx)	-1.12	0.64	2.94	0.33	0.09–1.15	0.082
Black (reference: Hispanic/Latinx)	-1.12	0.65	2.94	0.33	0.09–1.17	0.087
Asian (reference: Black)	-0.01	0.61	0.00	0.99	0.30–3.25	0.988

^a Logistic regression overall model statistics: χ²=19.08, df=7, N=168, p=0.008, R²=0.15. For each individual variable, df=1. EOD, Experiences of Discrimination Scale; PQ-92, 92-item Prodromal Questionnaire.

TABLE 3. Predictors of current mental health service use among individuals at clinical high risk for psychosis^a

Predictor	b	SE	χ^2	OR	95% CI	p
PQ-92 distressing positive symptoms	0.06	0.03	4.93	1.06	1.01–1.11	0.026
Asian (reference: White)	-0.97	0.56	3.01	0.38	0.13–1.14	0.083
Black (reference: White)	-1.48	0.68	4.67	0.23	0.06–0.87	0.031
Hispanic/Latinx (reference: White)	-0.85	0.60	2.03	0.43	0.13–1.38	0.155
Immigrated to United States	-1.08	0.62	3.05	0.34	0.10–1.14	0.081
EOD score	0.09	0.11	0.62	1.09	0.88–1.37	0.430
Social support score	-0.02	0.02	0.67	0.99	0.95–1.02	0.412
Follow-up model comparisons						
Asian (reference: Hispanic/Latinx)	-0.12	0.67	0.03	0.89	0.24–3.28	0.854
Black (reference: Hispanic/Latinx)	-0.63	0.67	0.87	0.53	0.14–2.00	0.351
Asian (reference: Black)	0.51	0.72	0.50	1.66	0.41–6.74	0.478

^a Logistic regression overall model statistics: $\chi^2=21.33$, $df=7$, $N=171$, $p=0.003$, $R^2=0.16$. For each individual variable, $df=1$. EOD, Experiences of Discrimination Scale; PQ-92, 92-item Prodromal Questionnaire.

household income was accounted for (for both past and current service use). Of note, these associations emerged even when we accounted for social support in the analyses, which can mitigate some of the need for mental health care.

In the full sample, distressing positive symptoms were positively associated with the likelihood of current use of mental health services, but not with past use of services. These findings were consistent with previous research linking higher positive symptom severity with increased service use (15, 46). Of note, although participants in the study sample met criteria for CHR-P, indicating that all participants reported some level of distress or impairment related to psychosis risk symptoms, higher levels of symptoms still predicted current service use. This finding suggests that the level of distressing positive symptoms may be a relevant factor associated with mental health service use, even among individuals at CHR-P.

When distressing positive symptoms, experiences of discrimination, immigration, social support, and household income were accounted for, participants at CHR-P who identified as Asian or Black were less likely than White participants and Hispanic/Latinx participants to have received mental health care in the past and were less likely than White participants to be currently using services. A prior study found that race-ethnicity predicts mental health care utilization among individuals reporting psychotic-like experiences (15). The present study found similar results during the CHR-P phase. Early connection to services during this phase can improve prognosis and facilitate better long-term clinical and functional outcomes (6). Thus, it is important to be cognizant of racial-ethnic group differences in mental health care utilization among people at CHR-P, which seem to exist even when potential sources of structural inequities such as household income are accounted for.

Various sociocultural factors, including attitudes toward mental health care, stigma, and access to care, may affect help seeking among Asian and Black youths at CHR-P (47–50). The racial-ethnic makeup of the mental health provider workforce (primarily White) (51) may contribute to failures in providing culturally responsive care (12, 29), potentially exacerbating medical mistrust among historically marginalized groups (23). Individuals who are less likely to use formal mental

health services may seek support from other social, familial, or community sources (14). Importantly, different factors may contribute to the lower likelihoods of service use by Asian and Black (vs. White) participants. Overall, racial-ethnic group differences emerged when other variables were accounted for, suggesting that differences cannot be explained solely by socioeconomic status or income, individual instances of racial discrimination, or social support and could be indicative of other systemic or unmeasured factors.

The results suggest that participants who immigrated to the United States may be less likely than those born in the United States to report past or current mental health care utilization, although these findings did not reach statistical significance. Furthermore, the magnitude of the difference in the likelihood of service use between U.S.-born and immigrant participants decreased when we accounted for household income in the analyses, suggesting that income or socioeconomic status may account for some of the differences between these two groups. A lower likelihood of service use among immigrants may be due to systemic barriers to accessing care, such as challenges with navigating health care systems, logistical barriers (e.g., insurance coverage), cross-cultural differences in conceptualization of mental health concerns, or a lack of culturally informed outreach and services (29). Moreover, immigrants may experience discrimination, migration-related stress, or concerns about rights and legal status, potentially deterring help seeking (46). Mental health systems may consider improving cultural awareness and responsiveness of services to be more accessible to immigrants (29).

Racial-ethnic discrimination and social support did not uniquely predict past or current mental health care utilization. Although experiences of discrimination have been linked to general mistrust of the health care system, our results were consistent with prior findings that discrimination does not significantly predict service use among youths with elevated psychotic-like experiences (15). Experiences of discrimination may represent an ongoing stressor that promotes help seeking for some individuals and deters it for others. In addition, the measure of discrimination used in this study included some situations that may have been less applicable to the youths in our sample (e.g., obtaining mortgages). Moreover,

higher-order manifestations of discrimination (e.g., structural racism or systemic oppression) that were not fully captured by the EOD may affect service use for people at CHR-P more than individual instances of interpersonal discrimination. If so, these higher-order factors may also partially explain service use differences across racial-ethnic groups.

Some White participants reported experiencing racial discrimination (Table 1), which may reflect heterogeneity within this group, such as subgroups that commonly experience racial-ethnic discrimination (e.g., Middle Eastern and North African individuals) or intersectional discrimination (e.g., gender and sexual orientation minority subgroups). Our sample's average EOD scores were consistent with the fact that race-based discrimination has been more often reported—and experienced at systemic and structural levels—by Asian, Black, and Hispanic/Latinx individuals (vs. White individuals) in the United States (52). Exploratory analyses that excluded White participants revealed consistent patterns of results with regard to experiences of discrimination (see Tables S3 and S4 in the online supplement).

Our null findings with regard to the influence of social support on mental health care utilization among those at CHR-P are challenging to interpret without additional research. Nevertheless, social support may motivate some individuals to seek mental health services and may reduce the desire or need for these services among others, potentially resulting in null findings. Interestingly, in exploratory analyses that excluded White participants, social support was a significant negative predictor of current service use, supporting the latter interpretation for Asian, Black, and Hispanic/Latinx participants (see Table S4 in the online supplement). Because of the small exploratory sample, findings should be interpreted with caution.

This study had several limitations. Participants were recruited through community outreach, potentially leading to self-selection bias, whereby individuals who are interested in mental health or are experiencing distress may be more likely to participate. The study, by design, was focused on self-referred community participants. Although this approach offered an important perspective on a poorly indexed but large and critical group, future work is needed to investigate whether the patterns observed in the present study would mirror a sample of individuals at CHR-P who were recruited through provider referrals. In addition, the sample was predominantly female, although statistically significant sex differences in key outcome variables were not identified. Inclusion criteria required proficiency in English, potentially excluding nonnative English speakers. Complementary measures of service use (e.g., health record data) were not available, although previous research suggests the validity of self-reported data on service use among individuals with serious mental illness (53). The study was cross-sectional, preventing an investigation of phenomena over time and prohibiting causal or mechanistic inferences. Future studies that leverage longitudinal and qualitative data are needed to support this study's conclusions.

Because of small available samples, some racial-ethnic groups were excluded from analyses in an effort to avoid arbitrarily combining such groups. In addition, the sample composition and size limited the types of analyses that could be appropriately conducted with regard to self-reported race-ethnicity. Replications with larger samples should be pursued to confirm these findings. Larger samples are also needed to provide sufficient power to explore potential interactions and whether associations between mental health care utilization and factors examined in the present study differ across self-reported racial-ethnic groups. Future work should explore additional social determinants that may influence mental health care utilization among individuals at CHR-P, such as financial strain and cost of services, as well as how such factors may intersect with self-reported race-ethnicity and immigration status.

CONCLUSIONS

Given that individuals at CHR-P may benefit from early intervention, understanding which social determinants are related to service use is important. In this sample of youths at CHR-P, higher symptom levels predicted current service use. Asian and Black participants were less likely than White participants to report past mental health care utilization, and Black participants were less likely than White participants to report current service use. Associations between immigration and service use were attenuated when analyses accounted for household income. The findings highlight that associations between contextual factors (i.e., self-reported race-ethnicity and immigration status) and mental health care utilization exist for individuals at CHR-P even when distressing positive symptoms, social support, and experiences of discrimination are accounted for. These findings suggest a need to increase outreach efforts or accessibility of services for youths at CHR-P who may be less likely to receive care.

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